

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :  
 Shouichi KOGA et al. : **Mail Stop: PCT**  
 Serial No. NEW : **Attorney Docket No. 2005\_1723A**  
 Filed January 6, 2006 :  
 SPACE DIVISION MULTIPLEX WIRELESS :  
 COMMUNICATION SYSTEM, DEVICE  
 AND METHOD FOR THE SAME :  
**[Corresponding to PCT/JP2004/017130**  
**Filed November 11, 2004]**

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED  
 TO CHARGE ANY DEFICIENCY IN THE  
 FEES FOR THIS PAPER TO DEPOSIT  
 ACCOUNT NO. 23-0975

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97 and 1.98, Applicants request consideration of the references listed on attached form PTO-1449 and any additional information identified below in paragraph 3. A legible copy of each reference listed on the Form PTO-1449 is enclosed, except a copy is not provided for:

- ☐ each U.S. Patent and U.S. Patent application publication;
- ☐ each reference previously cited in the international application PCT/\_\_\_\_\_; and/or
- ☐ each reference previously cited in prior parent application Serial No. \_\_\_\_\_.

1a. ☒ This Information Disclosure Statement is submitted:

within three months of the filing date (or of entry into the National Stage) of the above-entitled application, or

before the mailing of a first Office Action on the merits or the mailing of a first Office Action after the filing of an RCE,

**and thus no certification and/or fee is required.**

- 1b. ☐ This Information Disclosure Statement is submitted

after the events of above paragraph 1a and prior to the mailing date of a final Office Action or a Notice of Allowance or an action which otherwise closes prosecution in the application, and thus:

- (1) ☐ the certification of paragraph 2 below is provided, or  
(2) ☐ the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

- 1c. ☐ This Information Disclosure Statement is submitted:

after the mailing date of a final Office Action or Notice of Allowance or action which otherwise closes prosecution in the application, and prior to payment of the issue fee, and thus:

**the certification of paragraph 2 below is provided, and  
the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.**

2. It is hereby certified

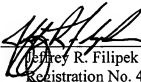
- a. ☐ that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or  
b. ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of the Statement.

3. ☐ Consideration of the following list of additional information (including any copending or abandoned U.S. application, prior uses and/or sales, etc.) is requested.
4. For each non-English language reference listed on the attached form PTO-1449, reference is made to:
- a. ☐ a full or partial English language translation submitted herewith,
  - b. ☒ an International Search Report (in the English language) submitted herewith,
  - c. ☒ the concise explanation contained in the specification of the present application at pages 1 and 3,
  - d. ☒ the concise explanation set forth in the attached English language abstract,
  - e. ☐ the concise explanation set forth below or on a separate sheet attached to the reference:
5. ☒ an International Search Report citing one or more of the references is enclosed.

Respectfully submitted,

Shouichi KOGA et al.

By



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January 6, 2006

Sheet 1 of 1

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: January 6, 2006

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2005\_1723ASERIAL NO.  
NEW

10/563634

APPLICANT  
Shouichi KOGA et al.FILING DATE  
January 6, 2006

GROUP

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
/AF/	AJ	2001-237751	8-31-01	Japan			abstract
/AF/	AK	10-178367	6-30-98	Japan			abstract
/AF/	AL	03/101009	12-4-03	WO			abstract
	AM						
	AN						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

/AF/	AO	Z. G. Pan et al., "MIMO Antenna System for Multi-User Multi-Stream Orthogonal Space Division Multiplexing", ICC 2003, 2003 IEEE International Conference on Communications, Anchorage, AK, May 11-15, 2003, IEEE International Conference on Communications, New York, NY: IEEE, US, 'Online! Vol. 1 of 5, May 11, 2003, pages 3220-3224, ISBN: 0-7803-7802-4, Retrieved from the Internet: URL: <a href="http://ieeexplore.ieee.org">http://ieeexplore.ieee.org</a> 'retrieved on 3-10-2005!
/AF/	AP	H. Tröger et al., "A channel oriented Joint Transmission scheme for MIMO multi-user downlinks", COST 273, 'Online! May 28, 2002, Finland, Retrieved from the Internet: URL: <a href="http://ieeexplore.ieee.org">http://ieeexplore.ieee.org</a> 'retrieved on 3-10-2005

EXAMINER

/Aristocratis Fotakis/

DATE CONSIDERED

10/08/2008